

## **TROPICAL RAINFALL MEASURING MISSION**

**July 5, 1999 - July 11, 1999**

**DOY 186 - 192**

**Day of Mission 585 - 591**

### **TRMM MISSION OPERATIONS**

- TRMM is flying in the -X Forward direction as of 99-182, at 18:40:49z.
- The next Yaw maneuver is scheduled for July 15th (99-196).
- Delta-V maneuver #110 is scheduled for July 14th (99-195) using the ISP thrusters.
- The Beta angle range for DOY 193 to 199 is  $-9.6^{\circ}$  to  $12.3^{\circ}$ .

### **TRMM SUBSYSTEM OPERATIONS**

#### **Attitude Control System**

Delta-V maneuver #109 was successfully conducted on 99-189 at 14:44:06z and 15:29:53z, for durations of 39.0 and 21.875 seconds respectively, using the ISP thrusters. The off-modulation of the -Pitch thruster (#6) for burn 1 and 2 was 38.8% and 36.0% respectively (61.2% and 64.0% on time). The remaining fuel is 713.729 kg and the final apogee and perigee height is 354.94 km x 347.41 km.

#### **Flight Data System (FDS)/Command & Data Handling (C&DH)**

The frequency standard continues to drift in the negative direction. The frequency remains  $x'765'$ , with a current drift rate of  $-2.09 \mu\text{s/hr}$ . The UTCF remains 31535996.863316 sec with a current drift value of  $-735 \mu\text{s}$ .

EDAC multi-bit errors occurred on 99-189 at 00:28z, 99-190 at 05:38z and 18:44z, and 99-191 at 13:16z and 14:23z.

Q-Channel restarts occurred on 99-189 at 09:49z and 17:12z, 191 at 08:50z, and 192 at 23:47z.

#### **Reaction Control Subsystem (RCS)**

The RCS subsystem performed nominally during this period. See the ACS section for specific Delta-V information.

#### **Power Subsystem**

The Power subsystem is operating nominally.

#### **Electrical Subsystem**

The Electrical subsystem operated nominally during this period.

**Thermal Subsystem**

The Thermal subsystem operated nominally during this period.

**Deployables Subsystem**

The Deployables subsystem performed nominally during this period.

**RF/Communications Subsystem**

The RF/Communications subsystem performed nominally during this period.

**SPACECRAFT INSTRUMENTS****CERES**

CERES personnel are developing a plan for operating the instrument with the +15 V DAA anomaly. Work continues in creating and testing the new Tables and RTSs required.

CERES was powered on 99-186 for continued Australia testing, as summarized below.

<b>Activity</b>	<b>Time</b>
Power ON	99-186-19:13:01z
Crosstrack	99-186-19:17:22z
Power OFF	99-186-21:00:20z

Australia testing has paused for this past week but will begin again on 99-194.

**LIS**

LIS performed nominally during this time period.

**PR**

PR performed nominally during this time period. The list of Internal Calibration times in which PR was not radiating is listed below:

1999:186:20:44:47-20:46:56z  
 1999:187:13:03:02-13:06:13z  
 1999:187:19:33:22-19:35:36z  
 1999:188:19:55:51-19:57:58z  
 1999:189:18:44:11-18:46:24z  
 1999:190:11:03:58-11:07:02z  
 1999:190:19:07:15-19:09:22z  
 1999:191:17:55:56-17:58:06z  
 1999:192:10:13:42-10:18:47z  
 1999:192:18:18:58-18:20:42z

## **TMI**

TMI performed nominally during this time period.

## **VIRS**

VIRS performed nominally during this time period.

## **GROUND SYSTEM**

Y2K testing has been completed on string 3. String 3 operational readiness testing will be performed after completion of rollover testing. String 2 remains the prime Mission Planning string for normal spacecraft operations.

PTP #1 hung on 99-187, causing a loss of Q-channel and NCC data (ER #108 - TTR #21053). A reset was performed, and an event was added to recover the data.

The MOC failed over to backup power for 35 minutes on 99-187, due to PEPCO power load problems during the recent heatwave.

The MOC was routed to conventional power on 99-191, for approximately 10 hours, so Facilities could perform repairs on the diesel backup system.

## **Event Reports**

#108 - No Q-channel and No UPDs During Event: see Ground System.

## **Generic Late Acquisition Reports (for TTRs 19639)**

No new generic late acquisition reports were generated during the week.

## **New Anomaly**

No new anomaly reports were generated during this week.

## **Recurring Open Anomalies**

There were no recurring open anomalies during this week.

Prepared by:  
Ed Weidner  
TRMM Systems Engineer

Approved by:  
Lou Kurzmillner  
FOT Manager